

WE CLAIM:

1. A compound comprising a heptasaccharide of formula GalNAc-a1,4-GalNAc-a1,4-[Glc- β 1,3]GalNAc-a1,4-GalNAc-a1,4-GalNAc-a1,3-Bac, wherein Bac is 2,4-diacetamido-2,4,6-trideoxy-D-glucopyranose or an immunologically active fragment thereof.
2. The compound as defined in claim 1 linked to an amino acid or oligopeptide.
3. The compound as defined in claim 2 wherein said amino acid is asparagine.
- 10 4. The compound as defined in any of claims 1, 2 or 3 derived from a glycoprotein isolated and purified from a campylobacter bacterium.
5. The compound as defined in claim 4, wherein said bacterium is selected from *C. jejuni*, *C. coli* and *C. fetus* ssp. *venerealis*.
- 15 6. A method of detecting a glycan moiety of a bacterial glycoprotein, the method comprising subjecting said sample to high resolution magic angle spinning nuclear magnetic resonance (HR-MAS NMR) spectroscopy.
7. A pharmaceutical composition comprising a compound of any of claims 1 through 5 and a physiologically acceptable carrier.
- 20 8. The pharmaceutical composition as defined in claim 7, further comprising an immunogenic conjugate.
9. The pharmaceutical composition of claim 7 or 8, further comprising an immunostimulant.
10. Use of the pharmaceutical composition as defined in any one of claims 7 through 9 as a vaccine in an animal or a human.

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11. An antibody or an antigen-binding fragment of an antibody that specifically binds with a compound comprising a glycan of the formula GalNAc-a1,4-GalNAc-a1,4-[Glc- β 1,3]GalNAc-a1,4-GalNAc-a1,4-GalNAc-a1,3-Bac, wherein Bac is 2,4-diacetamido-2,4,6-trideoxy-D-glucopyranose or an immunologically active fragment thereof.
12. An antibody or an antigen-binding fragment of an antibody that specifically binds with a compound as defined in any of claims 1 through 6.
13. An antibody or an antigen-binding fragment of an antibody which specifically binds with a compound as defined in any one of claims 1 through 6 derived from a gene isolated from a camelid.
14. The antibody or antigen-binding fragment thereof as defined in claim 13, wherein said camelid is selected from *Camelus bactrianus*, *Camelus dromaderius*, *Lama pPaccos*, *Lama ggGlama* and *Lama vVicugna*.
15. A pharmaceutical composition comprising the antibody or antigen-binding fragment as defined in any one of claims 11 through 14, and a physiologically acceptable carrier.
16. Use of the pharmaceutical composition as defined in claim 15 as a therapeutic agent in a human or an animal.
17. A method of reducing the presence of campylobacter pathogens from livestock, the method comprising administering to the livestock the antibody or antigen-binding fragment as defined in any one of claims 11 through 15.
18. A method as defined in claim 17, wherein said administration consists of feeding the livestock with feed mixed with said antibody or antigen-binding fragment.
- 25 19. The method as defined in claim 17 or 18, wherein said livestock is poultry.

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20. A method of preventing campylobacter infections caused by campylobacter pathogens in a human, the method comprising removing said pathogens from livestock by the method as defined in claim 17.
21. A method of treating a disease caused by campylobacter pathogens in a human or an animal, the method comprising administering the antibody or antigen-binding fragment as defined in any one of claims 11 through 14.
22. A method of preventing ground water contamination by campylobacter pathogens, the method comprising reducing the presence of said pathogens from livestock by the method as defined in claim 17.
23. An animal feed or drink for livestock comprising the antibody or antigen-binding fragment as defined in any one of claims 11 through 14.
24. A feed or drink as defined in claim 23 comprising an additive comprising said antibody or fragment.
- 15 25. A feed as defined in claim 23 comprising a plant containing a genome modified to express said antibody or fragment.
26. A plant genome containing a gene capable of expressing the antibody or antibody fragment as defined in any of claims 11 through 14.
27. A plant cell containing the genome defined in claim 26.
- 20 28. A plant containing the cell defined in claim 27.
29. The plant genome of claim 26, wherein said gene is obtained by panning a library of camelid genes with a probe comprising the compound defined in claims 1 through 5, for camelid genes capable of expressing said antibody fragment and incorporating said gene in a plant genome.

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30. A diagnostic kit for detecting the presence of campylobacter in animals or humans, said kit comprising the antibody or antibody fragment defined in any of claims 11-14.

31. A diagnostic kit for detecting the presence of campylobacter in a sample, said kit comprising the antibody or antibody fragment defined in any of claims 11-14.

32. The kit defined in claim 31 wherein said sample is selected from water, soil and manure.